

**SECRET**

[REDACTED]  
Monthly Report

25X1

PAR 249

30 Apr 69

SUBJECT: [REDACTED] Precision Enlarger Prototype (BPE) Operational  
Improvements and Maintenance

25X1

TASK/PROBLEM

1. Provide photographic enlarger maintenance at the customer's facility for one [REDACTED] Precision Enlarger (BPE) and three\* 10-20-40X Enlargers.

25X1

DISCUSSION

2. Contractor personnel visited the customer's facility during the week beginning 31 March 1969 to perform six-month preventive maintenance (PM) on the BPE, and two-month PM on four\* 10-20-40X Enlargers. (See check lists attached indicating the work performed.)

3. The six month PM on the BPE included a photographic checkout of the lens assemblies. During this checkout, the "H" lens-focus finding did not agree with the focus setting suggested on the drum scroll (a difference of 5 digits). As a result, this lens was returned to the factory for checkout. In addition, six "X" coordinate display lamps (yellow base) were replaced with longer life lamps (green base). The lamp problem is currently under investigation by the contractor and the vendor (Theta Corp).

4. The two-month PM on the four\* 10-20-40X Enlargers included the following necessary adjustments and repairs:

- a. Serial No. 101: "X" coordinate counter was inoperative; the customer states that an order has been placed for a new counter.
- b. Serial No. 119: "Y" coordinate counter was repaired and adjusted for proper operation.
- c. Serial No. 113: 10X condenser (lens) plano glass was replaced.

\* Although the Task/Problem specifies preventive maintenance on three 10-20-40X Enlargers, the contractor regularly services four enlargers on the basis of the customer's verbal request. The customer has stated that he does not consider it necessary to revise PAR 249 at this time.

Declass Review by NGA

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PLANNED ACTIVITY

5. Contractor personnel will visit the customer's facility during the week beginning 5 May 1969 to perform the 1-month PM on the BPE.

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**SECRET**PAR 249  
30 Apr 69**PREVENTIVE MAINTENANCE SCHEDULE CHECK LIST**

PRECISION ENLARGER

25X1

Assigned to:  Date 1 Apr 69 Machine Serial No. 001 (Prototype)

25X1

✓	Item	Description
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**Daily Interval**

✓	1	Check the four indicator lamps on the sub-control panel.
✓	2.1	Check closed-negative-gate interlock.
✓	2.2	Check interlock that causes vertical transport slow speed.
✓	2.3	Check interlock that disables negative transport after fluid injection.
✓	2.4	Check operation of microswitch that functions when manual-film-movement knob is pushed in.
✓	3.1	Check the indicator lamps for the two attenuator banks of the easel photometer.
✓	3.2	Check the meter scale illuminator lamp of the easel photometer.
✓	3.3	Check the antifatigue lamp in photo-multiplier tube housing.
✓	4	Clean the glass plates of the negative gate.

**One-Week Interval**

✓	1	Vacuum-clean the enlarger.
✓	2	Check, and if necessary, clean the objective lenses and all glass filters.
✓	3	Vacuum-clean the front surface of the easel.
✓	4	Check the fiber optics for broken fibers.

✓	Item	Description
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**One-Month Interval**

✓	1	Wax the steel rails of the lens ramp and of the easel.
✓	2	Install new air filter in lamphouse.
✓	3	Clean the nylon brushes of the fluid removal system.
✓	4	Check all tubing and hoses for cracks and air leakage.
✓	5	Check and, if necessary, clean the lenses of the condenser lens assemblies.

**Six-Month Interval**

✓	1.1	Make a photographic check on all six matching sets of objective and condenser lens assemblies.
✓	1.2	Be sure that film is tracking properly in both directions on the negative transport system.
✓	2	Check the timing belts of the film transport system, of the vertical drive system, and of the easel drive assembly for wear.

Checked by  Date 2 Apr 69

Changed 2/68

## REMARKS:

"H" lens focus differs from scroll by 5 digits; returned to factory for checkout. In addition, six yellow-base "X" coordinate display lamps were replaced with green-base (longer life) lamps.

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**SECRET**PAR 249  
30 Apr 69**PREVENTIVE MAINTENANCE SCHEDULE CHECK LIST**  
**TWO-MONTH INTERVAL**

PRECISION ENLARGER, 10-20-40X

Assigned To:  25X1Date: 3 Apr 69Machine Serial No. 101

✓	Item	Description	✓	Item	Description
	1	Film Transport		8	Vacuum Pump Assembly
✓	1.1	Static Removal Unit		8.1	Hoses and Couplings
✓	1.2	Guide Roller Flanges		8.2	Pump
✓	1.3	Air Knives		8.3	Oil Level
✓	1.4	Belts and Pulleys	✓	9	Lamp House Assembly
✓	1.5	Lubricate Bearings	✓	9.1	Housing
	2	Easel and Stencil Assembly	✓	9.2	Filter (Photographic)
✓	2.1	Easel	✓	9.3	Light Leaks
✓	2.2	Air Pressure System	✓	9.4	Lamp House Blower
	3	Illuminator		10	Immersion System
✓	3.1	Glass	✓	10.1	Ejectors
✓	3.2	Lamps	✓	10.2	Hoses and Couplings
✓	4	Negative Gate Interlock	✓	10.3	Blower
✓	5	Lenses	✓	10.4	Fluid Level
✓	6	Stripper Plate	✓	11	Lamp House Control
	7	Air Pressure System		12	Analyzer
	7.1	Air Lines		13	Photo Check
	7.2	Compressor Control		13.1	Resolution
	7.3	Relief Valve		13.2	Uniformity
	7.4	Regulator	✓	14	General Inspection
	7.5	Filter-Compressor			
	7.6	Drain Storage Tank			

Initials  25X1

## REMARKS:

"X" coordinate counter inoperative. A new counter is on order by the customer.

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30 Apr 69**PREVENTIVE MAINTENANCE SCHEDULE CHECK LIST**  
**TWO-MONTH INTERVAL**

PRECISION ENLARGER, 10-20-40X

Assigned To:  25X1Date: 2 Apr 69Machine Serial No. 113 (Army)

✓	Item	Description	✓	Item	Description
	1	Film Transport		8	Vacuum Pump Assembly
✓	1.1	Static Removal Unit		8.1	Hoses and Couplings
✓	1.2	Guide Roller Flanges		8.2	Pump
✓	1.3	Air Knives		8.3	Oil Level
✓	1.4	Belts and Pulleys		9	Lamp House Assembly
✓	1.5	Lubricate Bearings	✓	9.1	Housing
	2	Easel and Stencil Assembly	✓	9.2	Filter (Photographic)
✓	2.1	Easel	✓	9.3	Light Leaks
✓	2.2	Air Pressure System	✓	9.4	Lamp House Blower
	3	Illuminator		10	Immersion System
✓	3.1	Glass	✓	10.1	Ejectors
✓	3.2	Lamps	✓	10.2	Hoses and Couplings
✓	4	Negative Gate Interlock	✓	10.3	Blower
✓	5	Lenses	✓	10.4	Fluid Level
✓	6	Stripper Plate	✓	11	Lamp House Control
	7	Air Pressure System		12	Analyzer
	7.1	Air Lines		13	Photo Check
	7.2	Compressor Control		13.1	Resolution
	7.3	Relief Valve		13.2	Uniformity
	7.4	Regulator	✓	14	General Inspection
	7.5	Filter-Compressor			
	7.6	Drain Storage Tank			

Initials  25X1

## REMARKS:

10X condenser plano glass removed and replaced  
(Part No. 1160-250).Form No. MS-103  
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30 Apr 69**PREVENTIVE MAINTENANCE SCHEDULE CHECK LIST**  
**TWO-MONTH INTERVAL**

PRECISION ENLARGER, 10-20-40X

Assigned To:  25X1  
Date: 1 Apr 69  
Machine Serial No. 119

✓	Item	Description	✓	Item	Description
	1	Film Transport		8	Vacuum Pump Assembly
✓	1.1	Static Removal Unit		8.1	Hoses and Couplings
✓	1.2	Guide Roller Flanges		8.2	Pump
✓	1.3	Air Knives		8.3	Oil Level
✓	1.4	Belts and Pulleys	✓	9	Lamp House Assembly
✓	1.5	Lubricate Bearings	✓	9.1	Housing
	2	Easel and Stencil Assembly	✓	9.2	Filter (Photographic)
✓	2.1	Easel	✓	9.3	Light Leaks
✓	2.2	Air Pressure System	✓	9.4	Lamp House Blower
	3	Illuminator	✓	10	Immersion System
✓	3.1	Glass	✓	10.1	Ejectors
✓	3.2	Lamps	✓	10.2	Hoses and Couplings
✓	4	Negative Gate Interlock	✓	10.3	Blower
✓	5	Lenses	✓	10.4	Fluid Level
✓	6	Stripper Plate	✓	11	Lamp House Control
	7	Air Pressure System		12	Analyzer
	7.1	Air Lines		13	Photo Check
	7.2	Compressor Control		13.1	Resolution
	7.3	Relief Valve		13.2	Uniformity
	7.4	Regulator	✓	14	General Inspection
	7.5	Filter-Compressor			
	7.6	Drain Storage Tank			

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## REMARKS:

"Y" coordinate counter repaired and readjusted.

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30 Apr 69**PREVENTIVE MAINTENANCE SCHEDULE CHECK LIST**  
**TWO-MONTH INTERVAL**

PRECISION ENLARGER, 10-20-40X

Assigned To:  25X1Date: 2 Apr 69Machine Serial No. 123

✓	Item	Description	✓	Item	Description
	1	Film Transport		8	Vacuum Pump Assembly
✓	1.1	Static Removal Unit		8.1	Hoses and Couplings
✓	1.2	Guide Roller Flanges		8.2	Pump
✓	1.3	Air Knives		8.3	Oil Level
✓	1.4	Belts and Pulleys		9	Lamp House Assembly
✓	1.5	Lubricate Bearings	✓	9.1	Housing
	2	Easel and Stencil Assembly	✓	9.2	Filter (Photographic)
✓	2.1	Easel	✓	9.3	Light Leaks
✓	2.2	Air Pressure System	✓	9.4	Lamp House Blower
	3	Illuminator		10	Immersion System
✓	3.1	Glass	✓	10.1	Ejectors
✓	3.2	Lamps	✓	10.2	Hoses and Couplings
✓	4	Negative Gate Interlock	✓	10.3	Blower
✓	5	Lenses	✓	10.4	Fluid Level
✓	6	Stripper Plate	✓	11	Lamp House Control
✓	7	Air Pressure System		12	Analyzer
	7.1	Air Lines		13	Photo Check
	7.2	Compressor Control		13.1	Resolution
	7.3	Relief Valve		13.2	Uniformity
	7.4	Regulator	✓	14	General Inspection
	7.5	Filter-Compressor			
	7.6	Drain Storage Tank			

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REMARKS:

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